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#### ABSTRACT

This monograph presents the executive summary of a study evaluating the first-year impacts and program operations of Upward Bound, a federal pre-college program designed to help economically disadvantaged students complete high school and gain access to post-secondary education. In 1996, 45,000 students participated in the program through projects offered by 601 grantees; the average cost per student was \$3,800. Most students enter Upward Bound in ninth or tenth grade and participate in a multi-year program of weekly activities during the school year and an intensive summer program that simulates college. The study found two major impacts of Upward Bound--first, participating students expect to complete more schooling than similar students not in the program and, second, the program has a positive impact on the number of academic courses participants take. Other findings included: students who benefited most initially were those with lower academic expectations; Hispanic students appeared to benefit most from the program among racial/ethnic groups examined; the program showed no impact in the first year on participants' high school grades; many students left the program in the first year; and most Upward Bound projects focused on providing a rich and challenging program. (DB)

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## The National Evaluation of Upward Bound

## **Summary of First-Year Impacts** and Program Operations

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## The National Evaluation of Upward Bound

# Summary of First-Year Impacts and Program Operations

## **Executive Summary**

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Contract No. LC-92001001

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#### INTRODUCTION

The Upward Bound program is intended to fill an important need: helping disadvantaged high school students realize the dream of a college education. An ongoing evaluation of the Upward Bound program, the largest of the federally funded TRIO programs, is yielding important new information about the program's effectiveness, showing that it affects students early on, and in positive ways.

The federal government spent \$172 million on Upward Bound in 1996. Most students enter Upward Bound when they are in the ninth or tenth grade of high school. Once enrolled, students participate in a multiyear program of weekly activities during the school year and an intensive summer program that simulates college. In 1996, 45,000 students across the nation participated in the program, through projects offered by 601 grantees. The average federal cost per student was \$3,800.

The U.S. Department of Education asked Mathematica Policy Research to evaluate Upward Bound's effectiveness. Mathematica was assisted by its subcontractors, Educational Testing Service, Westat, and Decision Information Resources. This publication summarizes Mathematica's findings on the program's short-term impacts on students and the academic content of its services. All impacts reported are statistically significant. In October 1997, information about longer term impacts on students will be available.

#### **FINDINGS IN BRIEF**

- Two impacts emerge early on from Upward Bound. First, students who participate in the program expect to complete more schooling than similar students who do not. Second, the program has a positive impact on the number of academic courses participants take during high school.
- The students who benefit most initially are those with lower academic expectations.
- When impacts are examined by racial/ethnic groups, Hispanic students are found to benefit the most from Upward Bound.
- The program shows no impact in the first year on participants' high school grades.
- Many students leave the program in the first year.
- Most Upward Bound projects focus on providing a rich and challenging program.



#### A CLOSER LOOK AT SPECIFIC FINDINGS

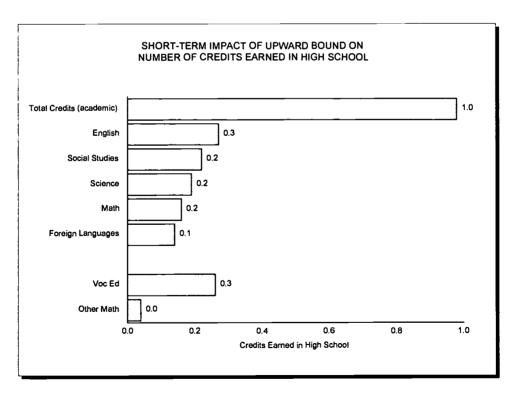
#### **Expectations About Continuing in School**

During the first year that students participate, Upward Bound bolsters the expectations for continued schooling that they and their parents hold.

- Participants, expected to complete almost .25 more years of school on average than nonparticipants. Both groups of students typically experienced some decline in educational expectations between the time of application to the program and the follow-up survey. The decline, however, was much larger for the control group.
- According to participants, their parents expected them to complete about .3 more years
  of schooling than did parents of children in the control group. The expectations of
  participants' parents changed little; however, the expectations of control group parents
  declined substantially.

#### **Credits Earned**

Upward Bound increases the number of high school academic credits students earn during the first year of participation (see figure).





- Participants earned about one credit (Carnegie unit) more than nonparticipants. This
  impact is quite large when compared with the experiences of a typical high school
  student, who each year is expected to complete about five academic and/or elective
  credits.
- Participants earned substantially more credits in science, math, English, foreign languages, and social studies than nonparticipants.
- Participants also earned more credits than nonparticipants in vocational education and remedial math courses.

#### Students Who Benefit Most

Before participating in Upward Bound, almost three-quarters of applicants who are eligible for the program expect to complete at least a four-year college degree. But those who benefit most from Upward Bound are those who do not expect to complete a four-year college degree.

- Parents' educational expectations for their children increased when their children started Upward Bound with lower expectations. For example, Upward Bound increased fathers' expectations by 1.2 years for these participants.
- In contrast, parents of children with higher initial expectations for continued schooling neither increased nor decreased their expectations.

In terms of academic preparation, Upward Bound has a large positive impact on the high school credits that students with lower expectations earn in math, English, and social studies.

- Participants with lower educational expectations gained almost .6 more math credits than their counterparts in the control group; the corresponding figure for students with higher expectations was .1 credit.
- Participation in Upward Bound also led to an increase of about .8 credits in English
  and social studies for students with lower expectations and less than .1 credit for those
  with higher expectations.
- Across all academic subjects, Upward Bound increased the number of credits earned by 3.1 for participants with lower expectations and by .5 credits for those with higher expectations.



Course taking for the three largest racial/ethnic groups in Upward Bound follows a consistent pattern: Hispanic students routinely experience larger gains from participation than either African American or white students.

- Hispanic students gained more than two credits; African American and white students gained less than .5 credits.
- Larger gains for Hispanics are apparent in several subjects: math, English, foreign languages, social studies, and vocational education.

#### First-Year Program Dropouts

Although Upward Bound has a substantial effect on educational expectations and course taking, the effect could be even larger if more students stayed in the program. Even in the first year, participants who leave Upward Bound early, for example, do not earn as many credits in high school as those who remain. Despite the value that comes from staying, many students do choose to leave Upward Bound in the first year. Furthermore, attrition from Upward Bound may be quite substantial by the time a group of entering students finishes high school.

- About 32 percent of those who entered Upward Bound before summer 1993 left by the end of the 1993-1994 academic year.
- Projections based on the experience of all students in the study suggest that 37 percent of those who participate will leave within the first 12 months.
- The program's dropout rate is very likely to increase at the end of the junior year, when project staff have reported that students are most likely to leave Upward Bound for summer and after-school jobs.

#### The Academic Challenge of Upward Bound

Most Upward Bound projects offer programs that emphasize academic preparation for college. Although an evaluation conducted in the 1970s by Research Triangle Institute prompted concern that Upward Bound projects did not devote enough time to academic instruction, recent evidence counters this view. The academic intensity of projects is evident from three perspectives.

Number of Courses Offered. Fifty percent of the Upward Bound projects offer more
than 17 academic courses in the summer and more than 10 academic courses during
the regular school year. These courses are in addition to the tutoring, academic
counseling, study skills, and SAT/ACT test preparation courses that almost all projects
provide.



- Nature and Content of Courses. More than two-thirds of the projects focus on instruction that is not remedial. These projects either support the curricular content in the college preparatory program of the high school, or they adopt an enrichment focus that teaches content the schools are unlikely to teach. Most projects offer courses that reflect a traditional precollege preparatory curriculum and a wide range of subjects.
- Course Requirements. Eighty percent of the projects require students to complete at least six courses in the Upward Bound program. The majority prescribe the set of courses that must be taken. Projects that specify courses fall into two groups. The first, which represents one-third of all projects, emphasizes completing a "foundational" curriculum comprising reading, writing, algebra I and II, and geometry. The second, which represents a slightly larger fraction of projects, has a math/science orientation with requirements for precalculus, calculus, and science courses in addition to the foundational requirements.
- Intensity of Contact with Students. Among first-year participants, the typical number of academic and nonacademic sessions attended was 274. Two-thirds of these sessions took place during the summer and the rest took place during the academic year.

#### Summing Up

The short-term impacts of Upward Bound, even though they are not evident for every kind of outcome, are both impressive and important. For just one year of involvement, Upward Bound offers real benefits to students. It exposes them to academically challenging courses in addition to those they take in high school. It results in participants and their parents holding higher expectations about future education. It leads to participants' earning more academic credits in high school. Moreover, Upward Bound is particularly beneficial for students who initially expect to complete fewer years of education and who come from Hispanic origins.

While these results are promising, they give only a partial view of how well Upward Bound works. Will the initial results endure and become larger as participants graduate from high school and face the challenge of college? Will the grades of participants and other outcomes that have yet to show impacts change as a result of students' involvement in the program? Answers to these questions will come as future reports about long-term program impacts are produced by the national evaluation.

#### ABOUT THE STUDY

The national evaluation of Upward Bound is a six-year, longitudinal study commissioned by the Planning and Evaluation Service of the U.S. Department of Education. The evaluation incorporates data from many sources, including nationally representative samples of regular Upward Bound grantees and their target schools, and a nationally representative sample of students who applied to the program between 1992 and 1994 and were randomly assigned either to Upward Bound or to a



control group.<sup>1</sup> Additional data were collected through field visits to a representative sample of 20 Upward Bound projects in the spring and the summer of 1993.

Because of the study design, findings on the impact of Upward Bound are generalizable to all Upward Bound projects hosted by two- and four-year colleges. The design uses a nationally representative sample of 67 Upward Bound grantees at two- and four-year colleges. Of students who were eligible applicants to these 67 projects, the evaluation randomly assigned 1,524 to Upward Bound and 1,320 to a control group. Short-term impacts are based on comparing students in the two groups across a range of measures, including high school grades and course taking, attitudes and educational expectations, misbehavior in school, and parental involvement. All students completed an initial survey form before they were randomly assigned to Upward Bound or the control group; more than 97 percent responded to a follow-up survey in 1994. Students' high school transcripts also were collected in 1994.

The survey of Upward Bound grantees collected detailed information about project operations and staffing for the 1992-1993 year. Questionnaires were mailed to a nationally representative sample of 244 projects, and 92 percent of the questionnaires were returned. The survey of target schools collected information from principals and Upward Bound liaisons in the schools (generally school guidance counselors) on a variety of topics, including the educational climate, availability of precollege programs in the school, contacts with Upward Bound, and perceptions of program effectiveness. Target school questionnaires went to a sample of 754 middle schools and high schools; 96 percent of these schools responded.

<sup>&</sup>lt;sup>1</sup>The focus of the national evaluation of Upward Bound is the regular Upward Bound program. Projects funded by the Upward Bound Math/Science initiative or Veterans' Upward Bound projects are not part of the national evaluation.



#### REPORTS FROM THE NATIONAL EVALUATION OF UPWARD BOUND

Two major reports describing the Upward Bound program and its short-term impacts are available:

Moore, Mary T. A 1990s View of Upward Bound: Programs Offered, Students Served, and Operational Issues. Washington, DC: U.S. Department of Education, Planning and Evaluation Service, 1996.

Myers, David E. and Allen Schirm. *The Short-Term Impacts of Upward Bound: An Interim Report.*Washington, DC: U.S. Department of Education, Planning and Evaluation Service, 1996.





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